

MONTHLY WEATHER REVIEW,

FEBRUARY, 1875.

WAR DEPARTMENT,

Office of the Chief Signal Officer,

DIVISION OF

TELEGRAMS AND REPORTS FOR THE BENEFIT OF COMMERCE AND AGRICULTURE

INTRODUCTORY.

The current Review is based upon the tri-daily telegraphic weather reports from seventy-eight stations in the United States and Canada and upon manuscript material from the following stations:

Canadian Meteorological Service, 11; U. S. Army Signal Service, 86; U. S. Army Surgeons, 25; U. S. Naval Hospitals, 1; Regular Volunteer Observers, 275; Logs of Vessels, and Miscellaneous sources.

The noticeable features of the month have been: First, the temperature, which, in all sections, has been below the mean of previous years, and in the northern half of the country lower than during any February recorded for the past twenty and in some sections past forty years. Second. An excess of rain in portions of the Gulf States and Tennessee. Third. The severe storm of the 23d, accompanied by thunder and lightning over a large portion of the country, and in Missouri and Iowa by a destructive tornado; floods also followed in Tennessee. Fourth. The ice-blockade of the Middle and East Atlantic coast, which has not been exceeded in severity before during the present century, being comparable to that of 1780.

BAROMETRIC PRESSURE.

The general distribution of barometric pressure during the month is shown by the isobars on Chart No. II, from which it will be seen that, on the average, the barometer has been lower in the Northern and Eastern sections of the country than it was in February, 1874, but has been higher in the Southern States.

(1.) *Areas of high barometer.*—The surface flow of cold air from British America has, as usual, taken place in connection with a series of areas of high barometer, which can be generally traced from Manitoba and Dakota southward. The cold surface-currents have, as a rule, extended southward to Texas, producing "Northers" on the Gulf coast, while the supply of cold has, at the same time, sufficed to cover the country eastward. The inward movement of the upper clouds and the outward flow of the lower stratum of air have, as usual, been well marked. The radiation outward during the nights and the early mornings of the 4th, 6th, 9—10th, 12—13th, 14—15th, lowered the temperature of the air at the earth's surface sufficiently to bring about in the central regions of the areas of high barometer Nos 1, 3, 4, 6 and 7 respectively, such depressions of temperature as are rarely witnessed, securing for the month the reputation of having been in general one of the coldest on record. It has been very generally evident that the cold air flowing southeastward over Dakota and Minnesota was confined